

Velocity and Acceleration

Lesson Review

Complete the following. Write your answers in the spaces provided. Show your work below each question.

- _____ 1. A motorcycle traveling due east at a constant speed covers 75 kilometers in 1.5 hours. What is its velocity in km/h?
- _____ 2. The speed of a train increases from 100 km/h to 250 km/h in 5 min. What is its acceleration?
- _____ 3. A car is traveling north at 15 m/s. Ten minutes later it is traveling at 70 m/s. What is the car's initial velocity? What is its acceleration?
- _____ 4. What is the acceleration of a baseball when its speed increases from 1 m/s to 25 m/s in 1 s?
- _____ 5. A plane flying south increases its speed from 450 km/h to 750 km/h in 0.30 h. What is the plane's final velocity? What is its acceleration?
- _____ 6. A bird is flying at 15 m/s. Five seconds later it is traveling at 50 m/s. What is its acceleration?
- _____ 7. What is the acceleration of a cheetah whose speed increases from 30 km/h to 120 km/h in 40 s?